

$$F_{\nabla} = 2\pi \cdot r^3 \frac{\sqrt{\epsilon_B}}{c} \left(\frac{\epsilon - \epsilon_B}{\epsilon + 2\epsilon_B} \right) (\nabla \cdot \mathbf{I})$$

F_{∇} = Optical force on particle towards higher intensity

r = Radius of particle

ϵ_B = Dielectric constant of background medium

ϵ = Dielectric constant of particle

I = Light intensity (W/cm^2)

∇ = Spatial derivative

FIG. 1

FIG. 2

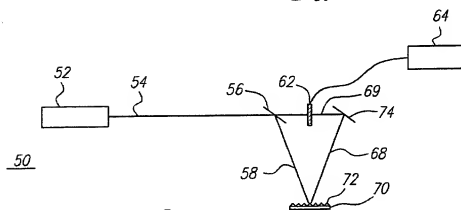
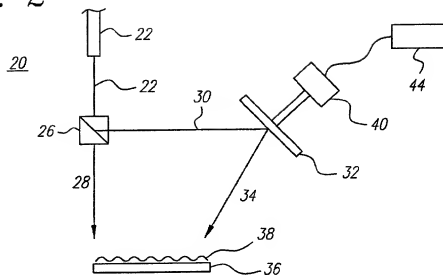


FIG. 3

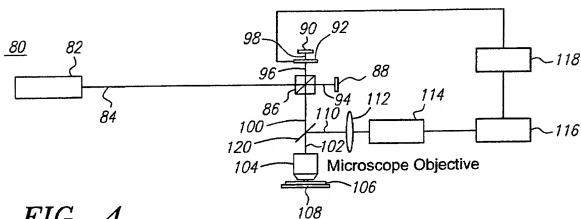


FIG. 4

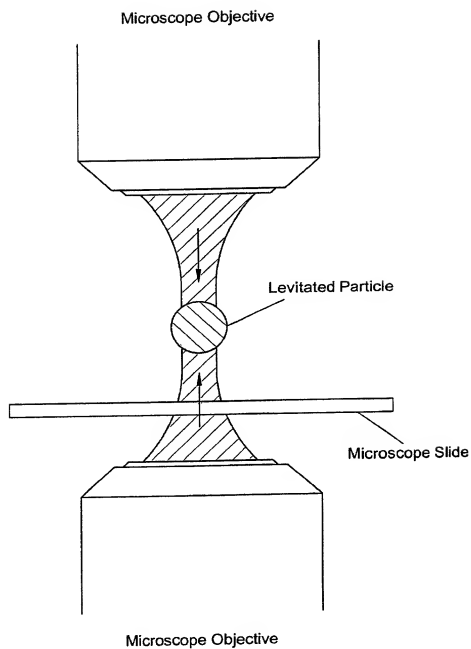


FIG. 4A

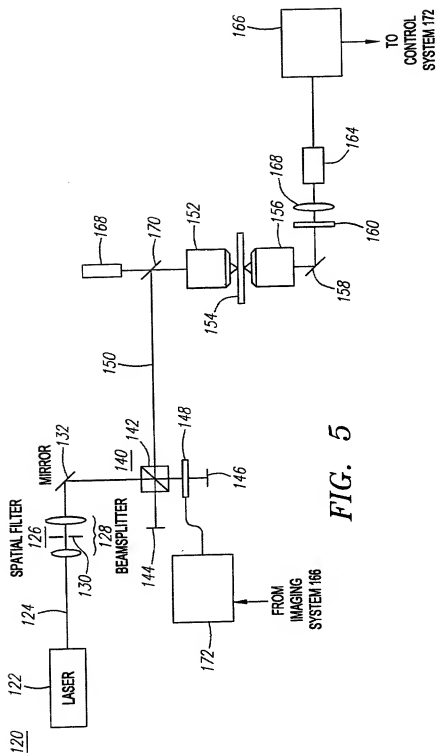


FIG. 5

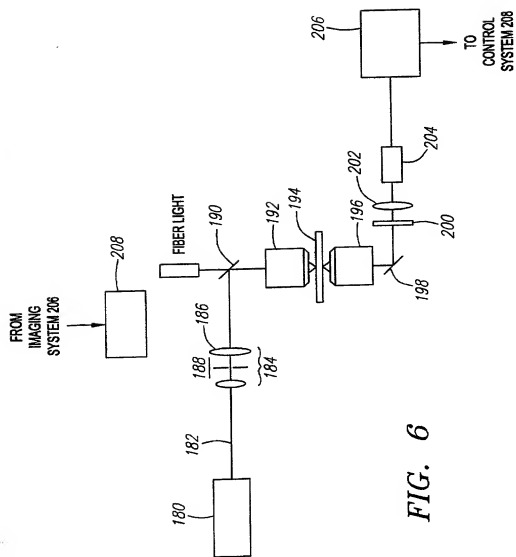
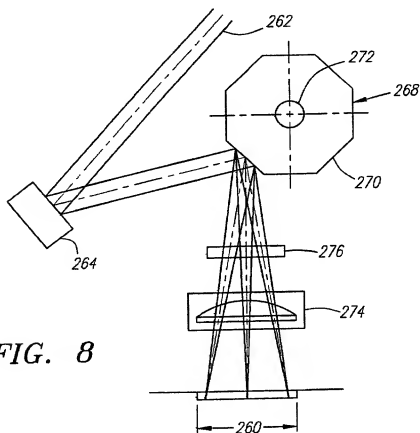
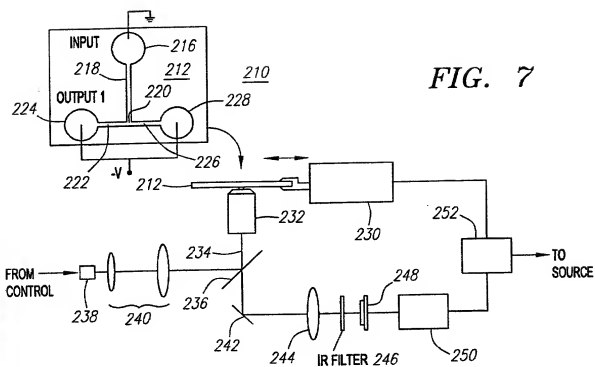
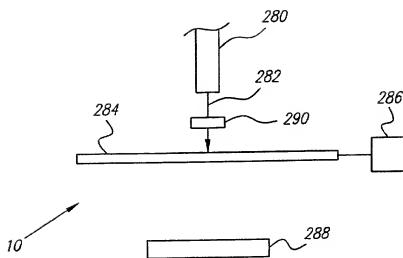
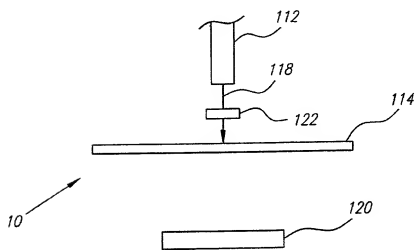


FIG. 6



**FIG. 9A****FIG. 9B**

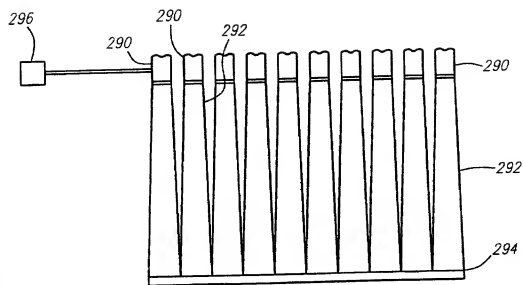
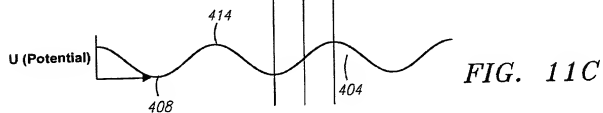
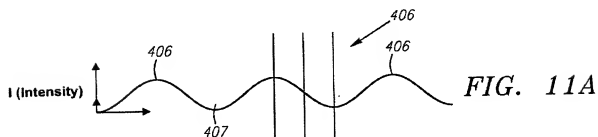


FIG. 10



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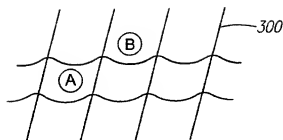


FIG. 12A

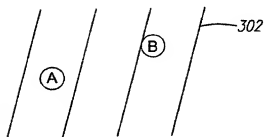


FIG. 12B

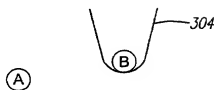


FIG. 12C

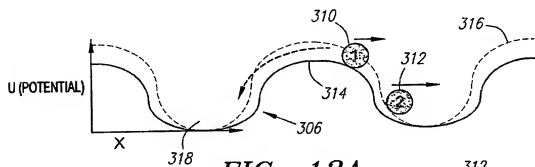


FIG. 13A

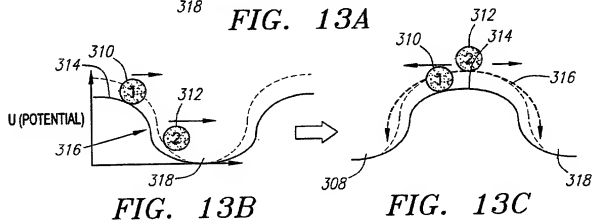


FIG. 13B

FIG. 13C

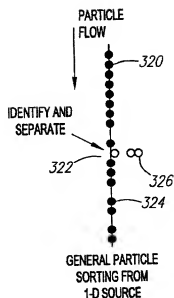


FIG. 14A

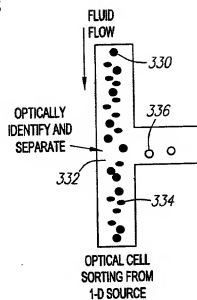


FIG. 14B

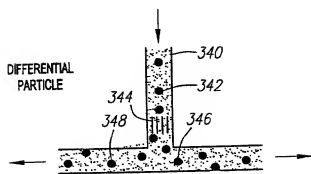


FIG. 15

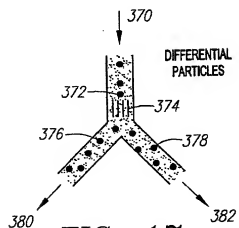


FIG. 17

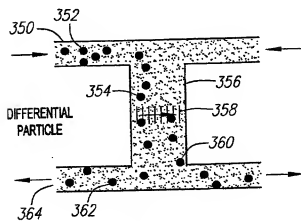


FIG. 16

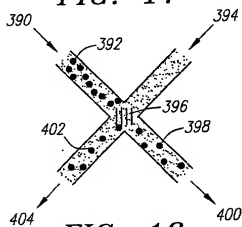


FIG. 18

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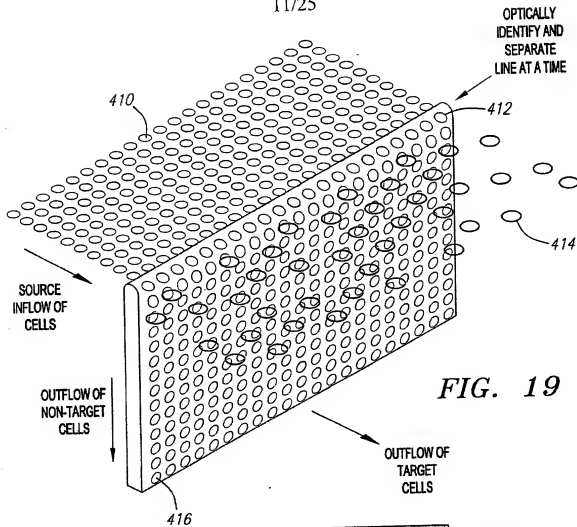
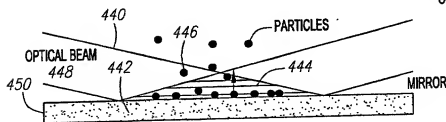
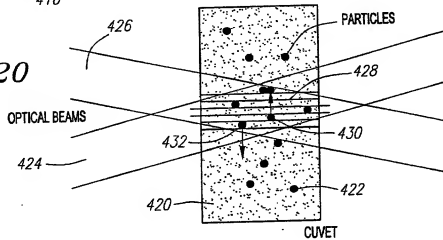
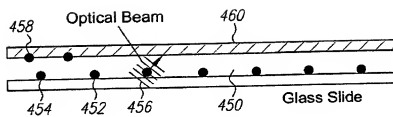
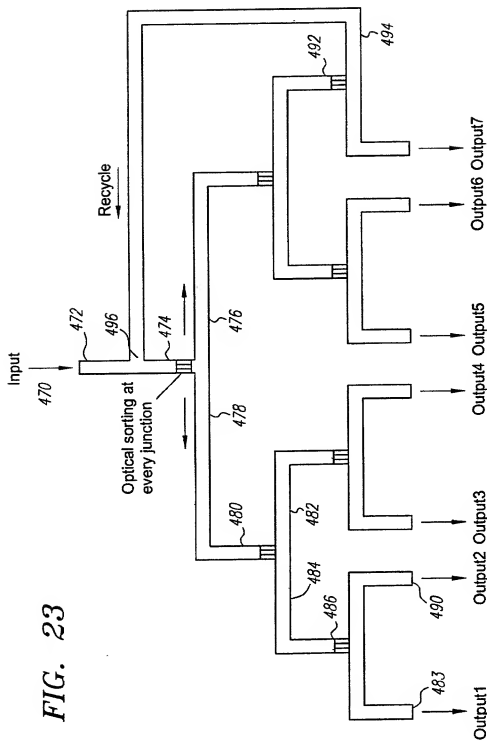


FIG. 20



*FIG. 22*



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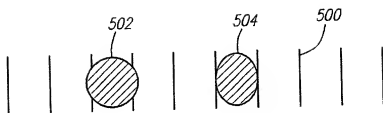


FIG. 24

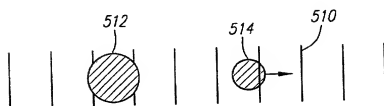
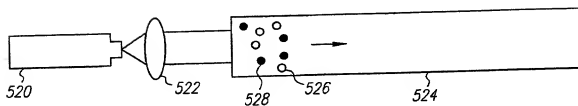


FIG. 25

Before:

SCATTER FORCE SEPARATION



After:

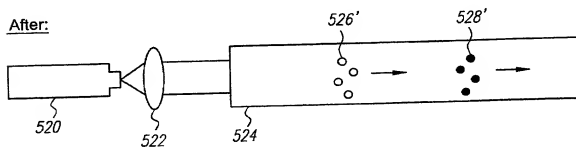


FIG. 26

10083567.001742

FIG. 27A

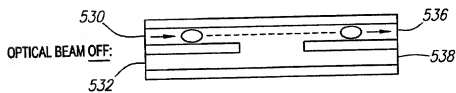
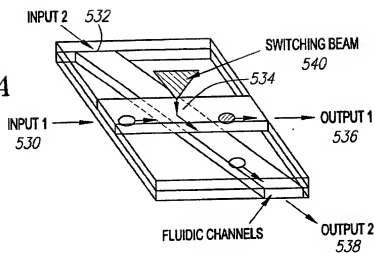


FIG. 27B

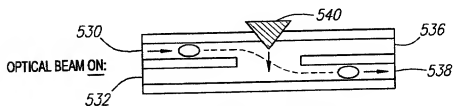


FIG. 27C

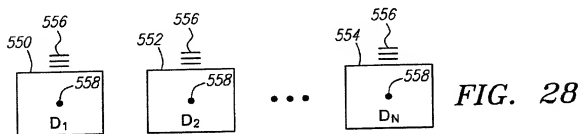
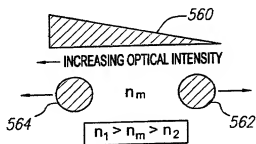


FIG. 28

FIG. 29



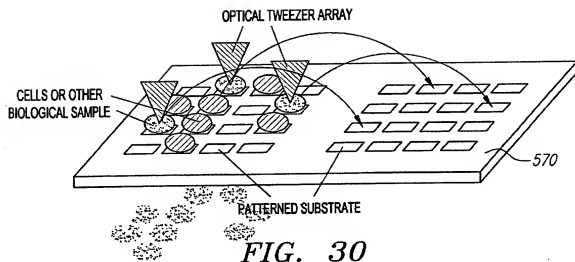


FIG. 30

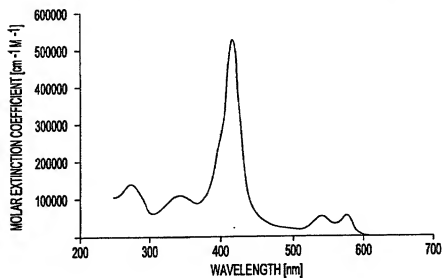
HEMOGLOBIN - O₂ ABSORPTION SPECTRUM

FIG. 31

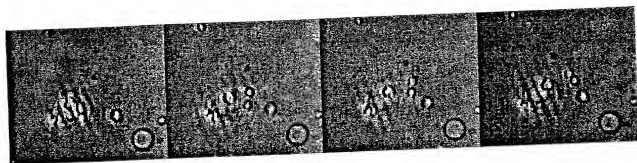


FIG. 32

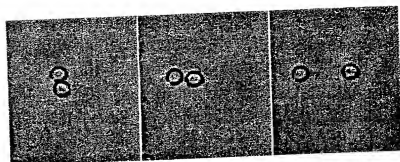


FIG. 33

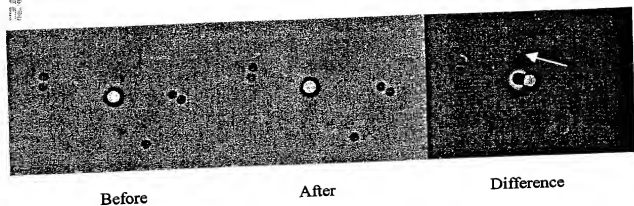


FIG. 34

DISTRIBUTION OF ESCAPE VELOCITIES
 READING TAKEN IN PBS/1% BSA BUFFER
 RAIN-X COATED SLIDE/CYTOP COATED COVERSIP

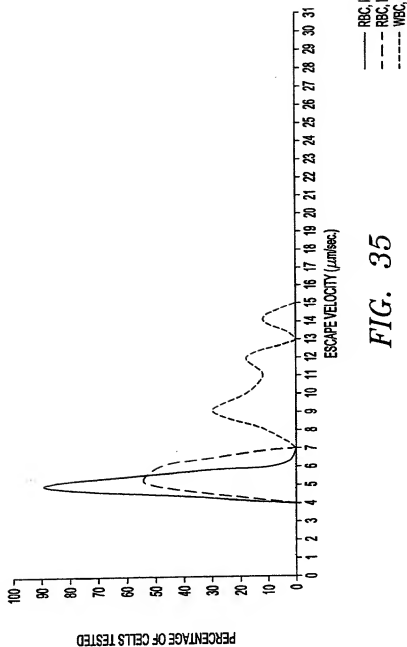


FIG. 35

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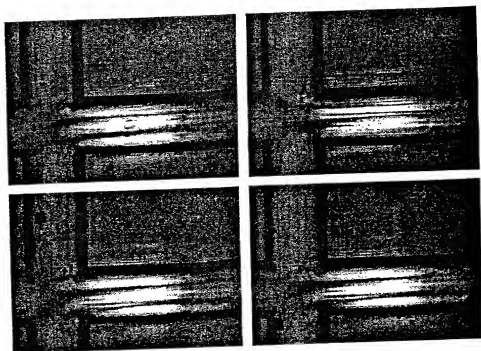


FIG. 36

2025-07-21 14:02

FIG. 37C

Phase3



Quick stepping movement

WBC - RBC

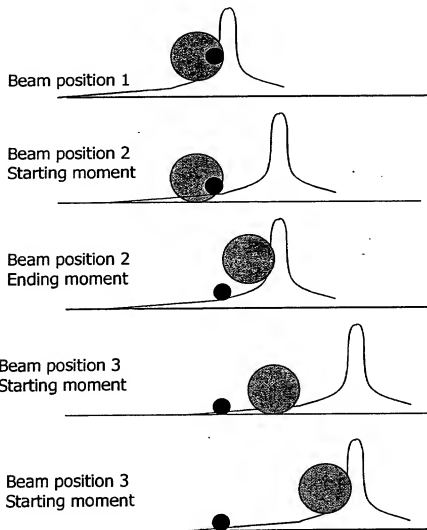
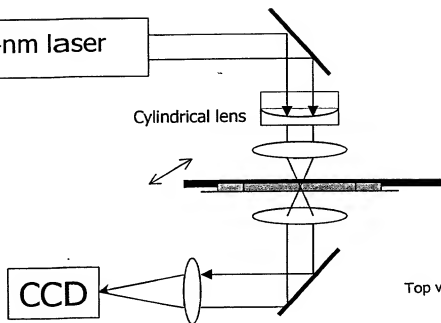


FIG. 38



Top view

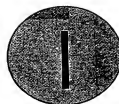


FIG. 39B

Using fast scanning

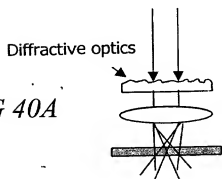


FIG 40A



Top view

FIG. 40B

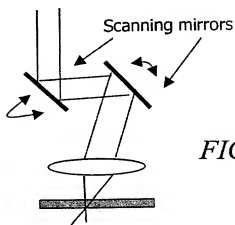
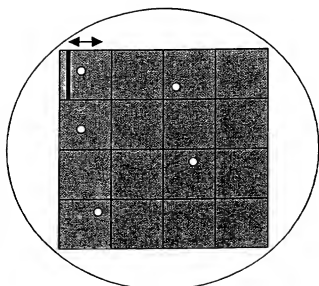


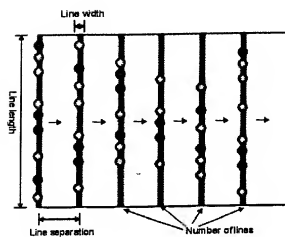
FIG. 40C



FIG. 40D



Sectioned sample field

FIG. 41*FIG. 42*

224770" 40555031

Phase 1

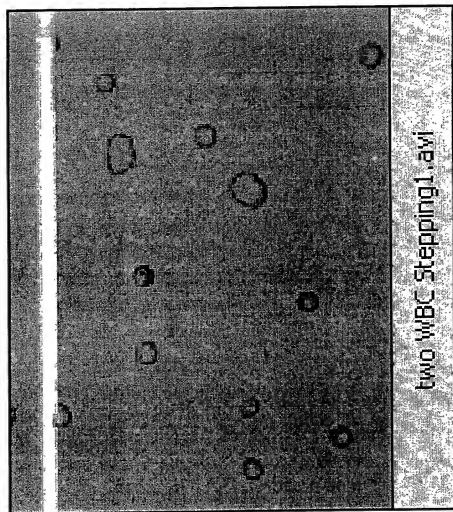


FIG. 43A

2024/11/28 10:55:00

Phase 2

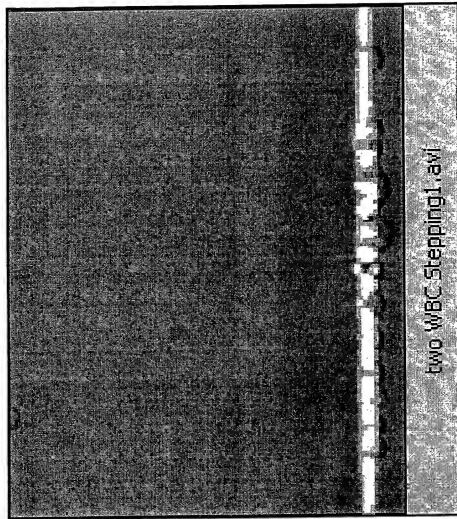


FIG. 43B

20241119 14:05:5001

Phase 3

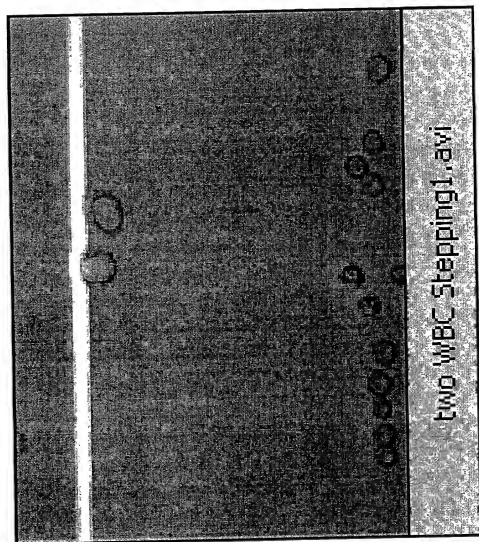


FIG. 43C